CRUISE SUMMARY REPORT

FOR COLLATIMG CENTRE USE

Centre: **DOD** **Ref. No.:**

Is data exchange restricted ☐ Yes ☐ In part ☐ No

SHIP enter the full name and international radio call sign of the ship from which the data were collected, and indicate the type of ship, for example, research ship; ship of opportunity, naval survey vessel; etc.

Name: **ALKOR** **Call Sign:** **DBND**

Type of ship: **Research Vessel**

CRUISE NO. / NAME **AL528**

enter the unique number, name or acronym assigned to the cruise (or cruise leg, if appropriate).

CRUISE PERIOD start **(set sail)** **18/09/2019** **day/ month/ year** to **30/09/2019** **day/ month/ year** end **(return to port)**

PORT OF DEPARTURE (enter name and country) **Kiel**

PORT OF RETURN (enter name and country) **Kiel**

RESPONSIBLE LABORATORY enter name and address of the laboratory responsible for coodinating the scientific planning of the cruise

Name: **GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel**

Address: **Wischhofstraße 1-3, 24148 Kiel**

Country: **Germany**

CHIEF SCIENTIST(S) enter name and laboratory of the person(s) in charge of the scientific work (chief of mission) during the cruise.

Dr. Jörg Süling, GEOMAR Helmholtz Centre for Ocean Research Kiel, Düsternbrooker Weg 20, 24105 Kiel, Germany

OBJECTIVES AND BRIEF NARRATIVE OF CRUISE enter sufficient information about the purpose and nature of the cruise so as to provide the context in which the report data were collected.

The overall objective of this practical for students is to investigate the ecological role of gelatinous plankton in the Baltic Sea food webs and alongside the salinity gradient. To demonstrate the temporal as well as spatial variation of pelagic communities such as bacteria-, phyto and zooplankton as well as in the benthic food webs, different food web tracers will be used. Main focus here is therefore to obtain qualitative and quantitative sample sets of gelatinous zooplankton to investigate their distinct role on bentho-pelagic processes.

Over the last several decades, a significant increase of both frequency and severity of jellyfish (JF) blooms were reported worldwide. Blooms of these organisms can extend for thousands of square kilometers, with drastic consequences and economic losses. When JF outbreak, they will not only affect the pelagic community by direct feeding on fish larvae, fish eggs or competing for the prey with bigger fishes, but only serve as organic matter source for benthic systems via sinking to the sea floor. Due to the scarcity of data on the potential role of gelatinous zooplankton from only few locations in the Baltic Sea, there is only a limited understanding on the role of JF in the bentho-pelagic food web of the Baltic Sea. A quantitative and qualitative assessment of gelatinous zooplankton in the BS systems and their functioning with regard to salinity gradient of the Baltic Sea , are now urgently needed to better account for the role of gelatinous zooplankton in the future of the system. Applicant and working group have performed this student research/educational cruise with the specific focus on jellyfish ecology every year and on a regular basis since 2013.

During this two-week cruise students will perform the compulsory „Practical at Sea“. The general goal is to survey and characterize the temporal and special distribution of bacterial, phyto-, zooplankton and macroplankton specially jellyfish in Skagerrak and Baltic Sea.

PROJECT (IF APPLICABLE) if the cruise is designated as part of a larger scale cooperative project (or expedition), then enter the name of the project, and of organisation responsible for co-ordinating the project.

Project name: BiOc-Praktikum-2019

Coordinating body: GEOMAR

PRINCIPAL INVESTIGATORS: Enter the name and address of the Principal Investigators responsible for the data collected on the cruise and who may be contacted for further information about the data. (The letter assigned below against each Principal Investigator is used on pages 2 and 3, under the column heading 'PI', to identify the data sets for which he/she is responsible)

A. Dr. Jörg Süling, GEOMAR Helmholtz Centre for Ocean Research Kiel, Düsternbrooker Weg 20, 24105 Kiel, Germany

B. Dr. Jamileh Javidpour, University of Southern Denmark, Campusvej 55, DK-5230 Odense M

C. M. Sc. Ina Stoltenberg, University of Southern Denmark, Campusvej 55, DK-5230 Odense M

D. M. Sc. Fabian Wolf, GEOMAR Helmholtz Centre for Ocean Research Kiel, Düsternbrooker Weg 20, 24105 Kiel, Germany

E. M. Sc. Christian Furbo Christiansen, University of Southern Denmark, Campusvej 55, DK-5230 Odense M

F.

MOORINGS, BOTTOM MOUNTED GEAR AND DRIFTING SYSTEMS

This section should be used for reporting moorings, bottom mounted gear and drifting systems (both surface and deep) deployed and/or recovered during the cruise. Separate entries should be made for each location (only deployment positions need be given for drifting systems). This section may also be used to report data collected at fixed locations which are returned to routinely in order to construct 'long time series'.

PI	APPROXIMATE POSITION						DATA TYPE	DESCRIPTION
	LATITUDE			LONGITUDE				
See top of page.	deg	min	N/S	deg	min	E/W	enter code(s) from list on cover page.	Identify, as appropriate, the nature of the instrumentation the parameters (to be) measured, the number of instruments and their depths, whether deployed and/or recovered, dates of deployments and/or recovery, and any identifiers given to the site.

								Please continue on separate sheet if necessary

SUMMARY OF MEASUREMENTS AND SAMPLES TAKEN

Except for the data already described on page 2 under 'Moorings, Bottom Mounted Gear and Drifting Systems', this section should include a summary of all data collected on the cruise, whether they be measurements (e.g. temperature, salinity values) or samples (e.g. cores, net hauls).

Separate entries should be made for each distinct and coherent set of measurements or samples. Different modes of data collection (e.g. vertical profiles as opposed to underway measurements) should be clearly distinguished, as should measurements/sampling techniques that imply distinctly different accuracy's or spatial/temporal resolutions. Thus, for example, separate entries would be created for i) BT drops, ii) water bottle stations, iii) CTD casts, iv) towed CTD, v) towed undulating CTD profiler, vi) surface water intake measurements, etc.

Each data set entry should start on a new line – it's description may extend over several lines if necessary.

NO, UNITS : for each data set, enter the estimated amount of data collected expressed in terms of the number of 'stations'; miles' of track; 'days' of recording; 'cores' taken; net 'hauls'; balloon 'ascents'; or whatever unit is most appropriate to the data. The amount should be entered under 'NO' and the counting unit should be identified in plain text under 'UNITS'.

PI	NO	UNITS	DATA TYPE	DESCRIPTION Identify, as appropriate, the nature of the data and of the instrumentation/sampling gear and list the parameters measured. Include any supplementary information that may be appropriate, e. g. vertical or horizontal profiles, depth horizons, continuous recording or discrete samples, etc. For samples taken for later analysis on shore, an indication should be given of the type of analysis planned, i.e. the purpose for which the samples were taken.
see page 2	see above	see above	Enter code(s) from list on cover page	
BCDE	**27**	**stations**	**G02**	**sediment samples by Van Veen grab for biological and biogeochemical analyses**
BCDE	**2**	**stations**	**G01**	**Dredge**
BCDE	**107**	**stations**	**H90**	**Chemical oceanographic measurements**
BCDE	**107**	**stations**	**B72**	**Biochemical measurements (e.g. lipids, aminoacids)**
BCDE	**107**	**stations**	**B59**	**Taxonomy systematics classification**
BCDE	**55**	**stations**	**H10**	**CTD casts**
BCDE	**17**	**stations**	**H09**	**Water bottle stations**
BCDE	**107**	**stations**	**B09**	**Zooplankton**
E	**107**	**stations**	**B16**	**Benthic bacteria / micro-organisms**

				Please continue on separate sheet if necessary

TRACK CHART: You are strongly encouraged to submit, with the completed report, an annotated track chart illustrating the route followed and the points where measurements were taken.	**Insert a tick(✓) in this box if a track chart is supplied** ☒

GENERAL OCEAN AREA(S): Enter the names of the oceans and/or seas in which data were collected during the cruise – please use commonly recognised names (see, for example, International Hydrographic Bureau Special Publication No. 23, 'Limits of Oceans and Seas').

Baltic Sea

SPECIFIC AREAS: If the cruise activities were concentrated in a specific area(s) of an ocean or sea, then enter a description of the area(s). Such descriptions may include references to local geographic areas, to sea floor features, or to geographic coordinates.
Please insert here the number of each square in which data were collected from the below given chart

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GEOGRAPHIC COVERAGE - INSERT 'X' IN EACH SQUARE IN WHICH DATA WERE COLLECTED

see above